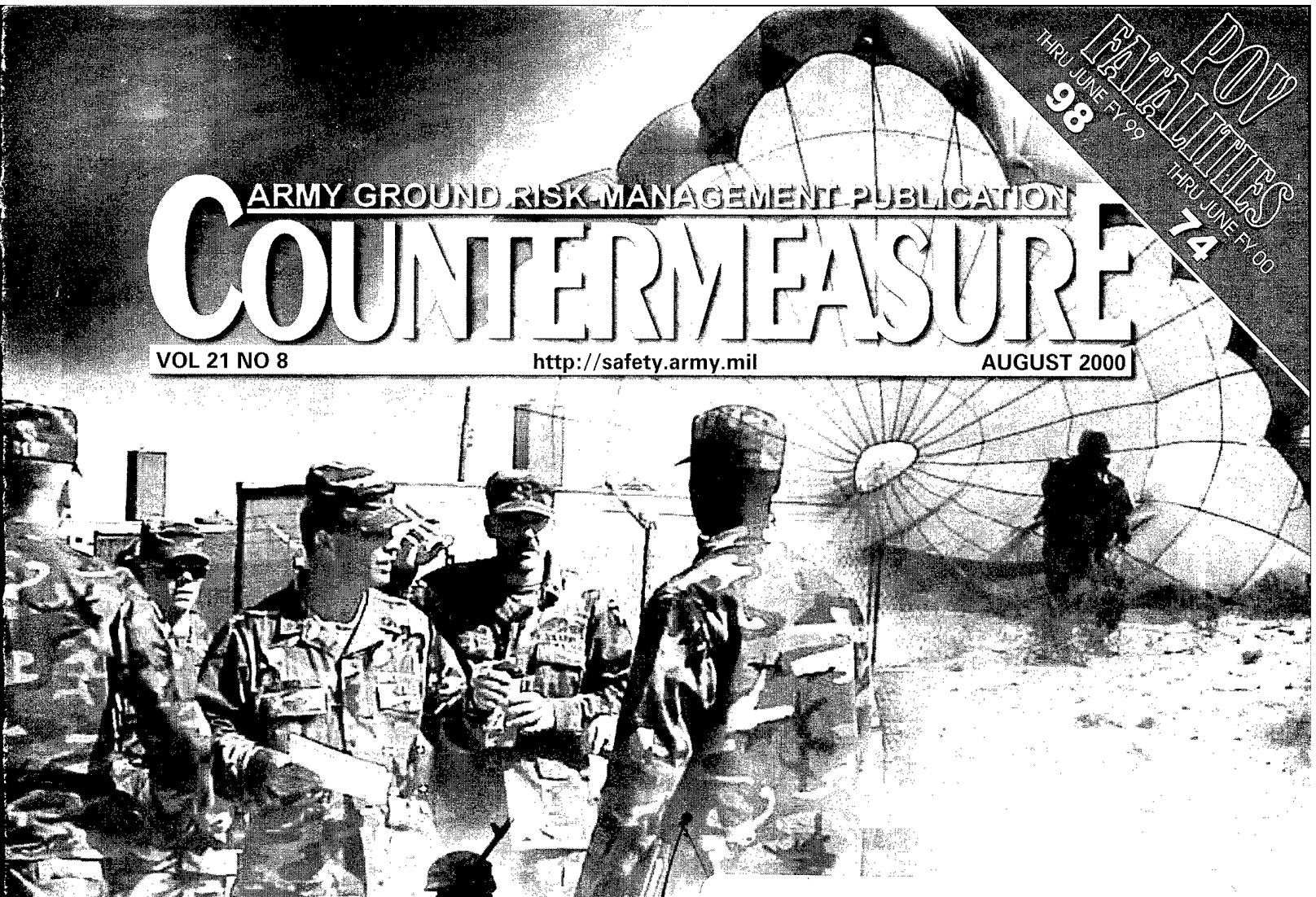
ARMY GROUND RISK MANAGEMENT PUBLICATION

COUNTERMEASURE

VOL 21 NO 8 http://safety.army.mil AUGUST 2000

POV FATALITIES
THRU JUNE FY 99 98
THRU JUNE FY 00 74



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Risk Management Special Issue

Protect The Force Through Risk Management!

ARMY GROUND RISK-MANAGEMENT PUBLICATION

COUNTERMEASURE

AUGUST 2000 VOLUME 21 NO 8

The Official Safety Magazine for Army Ground Risk-Management

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Summer continues and so does the possibility of accidents and injuries.
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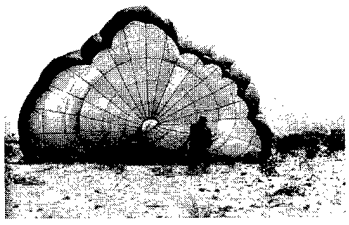

Risk Management for Joint Level Exercises
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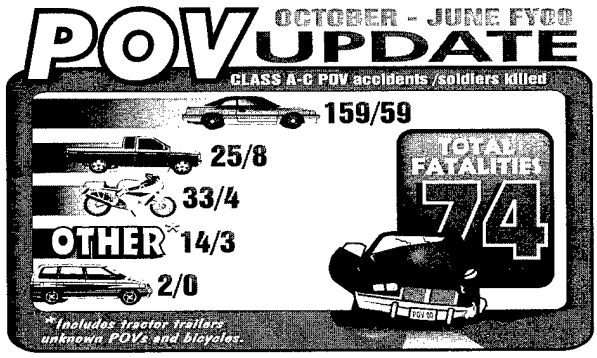

U.S. ARMY SAFETY CENTER

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Gene M. LaCoste
Brigadier General, U.S. Army
Commanding Officer

Summer's Still Here

It's been a long, hot summer. We've cleared the Memorial Day weekend and the Fourth of July, and the Labor Day weekend is now in sight.

Everyone knows how traditionally dangerous this period is; therefore, we must not cut back on our safety emphasis. Over the next month, many of us will continue to enjoy summer picnics, water sports, and long drives to the beach. Unfortunately, many will be exposed to a much greater level of risk, as they will try to cram too many activities into what's left of summer vacation.

Leaders must ensure all risk management tools are available and used in this effort. Re-energize the 101 Days of Summer Prevention Program. Reinforce it with briefings, handouts, and discussions on what risk management is and how it can help prevent needless accidents. If you need assistance in getting a risk management program started or obtaining training in identifying hazards and implementing controls, check out the "Risk Management Information System" article on page 4.

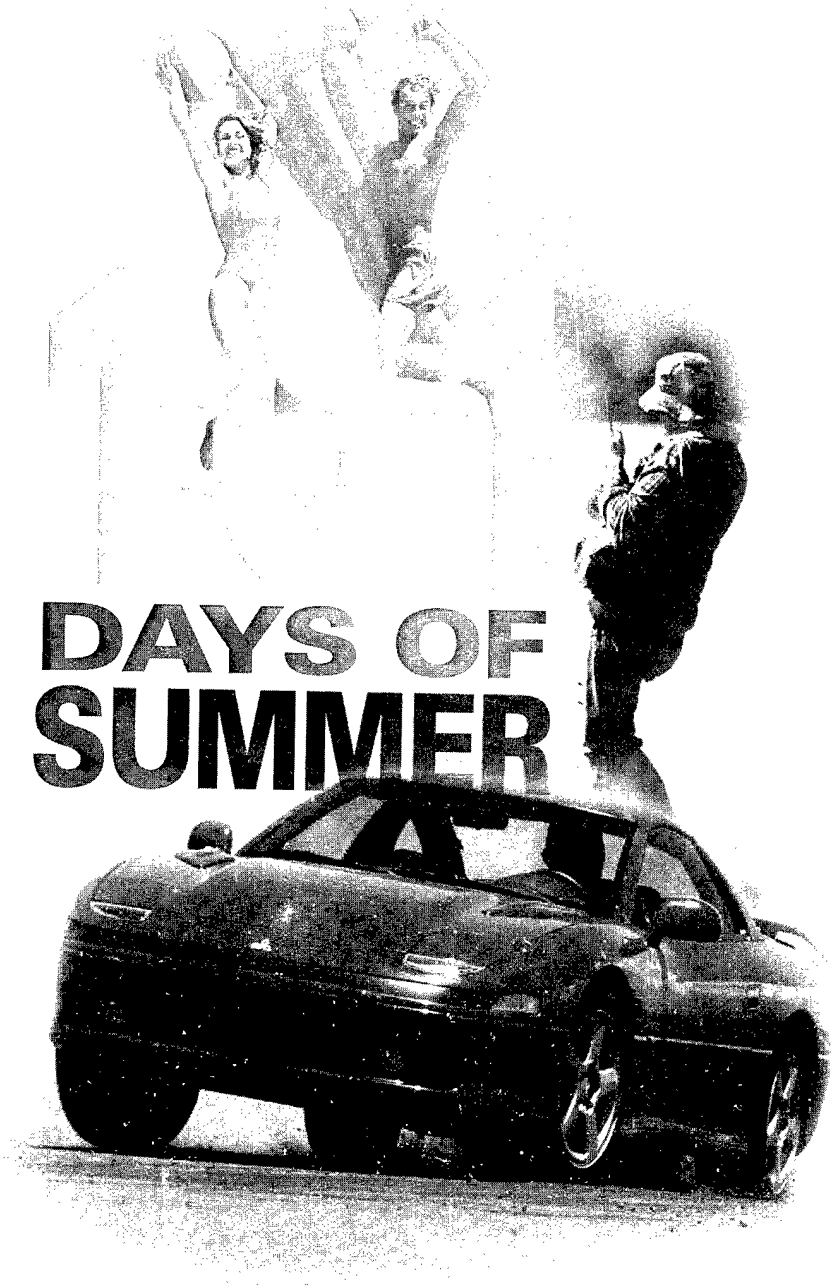
Another outstanding initiative the Safety Center has developed is the on-site Assistance Visit Program and the NCO Professional Development Mobile Training Team. Find out more about these programs on pages 6-8.

We are enthusiastic about the risk-reduction potential of these tools. As with any program, solid command support, with emphasis up and down the chain of command, is the key to success.

It is everyone's responsibility to keep risk management in the forefront of every activity we do. Take the time to recognize the hazards and assess the risks involved in whatever we do, whether on- or off-duty. By identifying the risks associated with the activity, we can take the appropriate actions to reduce or eliminate the risks.

Have fun during the last days of summer and enjoy family and friends, but don't let the fun get in the way of common sense and good judgment. Remember we are still in the 101 Days of Summer, but the real safety campaign is never over—our work is important all year long. You are an important part of our Army family. Take responsibility for your safety and the safety of those who depend on you. ♦

Mission First, Safety Always!
Paula



Risk Management Information System

The safety successes achieved by the Army demonstrate the commitment and dedication of its leadership to protecting the force and multiplying combat effectiveness. The Army Risk Management Information System (RMIS) is a powerful risk-management tool aimed at helping meet Department of Defense and Army goals for accident prevention.

RMIS is a worldwide Internet-based risk-management tool designed to help leaders and their staffs make informed decisions to do tough missions safely. It is available in both a public and a restricted version. RMIS is also a centralized, one-stop shopping source of near real-time information on hazards, risks, and controls. It's designed to help people get and share important information. Things like "lessons learned" are critical and can keep people from "reinventing the wheel" or making the same mistakes that someone else has already made.

As evidenced by its heavy use—127,911 requests from 28,605 users during the month of June 2000—RMIS continues to grow more robust as the functional areas are expanded and new sections are populated with data. Following is a recap of major additions and improvements as this powerful "intelligence" system continues to grow:

■ **Weapon Systems.** This section now contains direct links to the Army accident database and information on the Army's primary systems (tracked vehicles, wheeled vehicles, and aircraft). Also included are other safety links to risk management assessment tools, prioritized system hazards, and accident profiles.

■ **Privately owned vehicles (POVs).** This section was designed by a process action team to help Army agencies address POV accidents, the largest source of soldier losses. Included is the latest Six-Point Accident Prevention Program directed for use by the Chief of Staff Army. The POV Risk Management Toolbox inculcates proactive risk control measures and provides training and guidance tips to leaders and safety personnel. This section also contains a library of attention-getting accident photos that can be used for safety briefings.

■ **Training.** Significant improvements include 5-minute safety briefings on a variety of subjects, ranging from hazardous materiel handling to electrical systems, the latest "hot news," and listings of available professional safety training.

■ **Safety messages.** Ensuring everyone "gets the word" has always been an Armywide problem. Aviation safety messages are now available (SOFs, ASAMs, night vision, and life support equipment) as well as ground safety messages (GPMs, SOUMS, and MAMs are linked to the Army Materiel Command's restrictive web site, **http://aeps.ria.army.mil**). In addition, the Director of Army Safety notifies the field, via safety alert messages, of accident trends identified through the centralized accident investigation process and through detailed analysis of accident data reported to the Safety Center.

■ **Help link.** The Safety Center's help desk is readily accessible via this system to answer any technical or non-technical questions regarding risk management of systems and operations.

■ **RMIS training.** Information on the availability of RMIS training is provided at every civilian and military professional course taught by the U.S. Army Safety Center. Also, training to MACOMs and field agencies is available on request. RMIS is also briefed as a primary risk-reduction tool to all division commanders, students at the Pre-Command Courses, the Warrant Officer Staff Course, students attending the Air War College, and a brief overview of RMIS is provided to students attending the Inspector General School.

Fur further information on RMIS or to schedule training on the system, contact Mr. Dwight Lindsey, RMIS Program Manager. User notification and password access can be obtained through Ms. Wanda Thornton at DSN 558-2920 (334-255-2920) or thorntonw@safety center.army .mil. ♦

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Risk Management on the Highway

Preventive Maintenance Can Stop Breakdowns

When traveling the highways and back roads, a motorist can unfortunately suffer mechanical breakdowns. You see stranded motorists every day on the side of the road. You may think it won't happen to you, but the odds aren't in your favor.

Even well-maintained cars can sometime break down. The most common breakdowns are from flat tires, dead batteries, broken fan belts, and running out of gas. You should routinely check these items or have someone check them for you. If you don't, you may end up on the side of the road too.

However, if it does happen to you—

- Immediately pull off the roadway to the extreme right as far from traffic as possible. If that's not possible, pull over to the median.
- Place flares or reflective triangles at least 50 meters in front and behind your vehicle so other motorists can see you.
- Turn on your hazard flashers.
- Raise your hood or tie a white cloth to the antenna to signal that you need assistance.
- If you are repairing a vehicle at night, NEVER stand or work so as to obscure your taillights.
- If a flat occurs, the most immediate concern is to maintain control of the vehicle. Use both hands on the steering wheel and don't slam on the brakes; apply the brakes gradually and pull completely off the roadway away from moving traffic. Never try changing a flat tire in or on the edge of a traffic lane. Leaving a parked car in or partially in a traffic lane sets up a death trap for other motorists.
- Cellular phone users can help by reporting broken-down vehicles to the police.

Preventive maintenance is the key to staying on the road

- Inspect radiator hoses for cracks, wear, and leaks. Never remove the radiator cap until the engine has thoroughly cooled!
- Flush and refill the cooling system every 24 months.
- Check tire pressure at least once a month. Don't forget your spare tire, and be sure the jack is in good condition. Examine tires for tread life and uneven wearing. Rotate tires about every 5,000 miles.
- Check fluid levels regularly.
- Clean windshield. A dirty windshield causes eye fatigue and can pose a safety hazard. Replace worn blades and get plenty of windshield washer solvent.
- Inspect all lights and bulbs; replace burned-out bulbs.
- Inspect brakes as recommended in your manual, or sooner if you notice pulsations, grabbing, noises, or longer stopping distance. Minor brake problems should be corrected promptly.
- Check battery fluid level monthly. Check for corrosion. Wear proper eye and skin protection while servicing or cleaning battery. If batteries are sealed or "maintenance-free," take it to an authorized battery service center.

Always have these items on hand for safety and comfort: drinking water, a windshield shade for reducing heat build-up inside the vehicle, a cellular telephone or citizens band radio for summoning help, an automotive tool kit, a gallon of water, a gallon of antifreeze, and an emergency kit containing a flashlight with extra batteries, warning devices such as flares or reflective triangles, jumper cables, and a first-aid kit.

Remember to plan ahead, take care of your car by performing preventive maintenance, and it will take care of you. ♦

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Assistance Visits: Effective Tools for Leaders

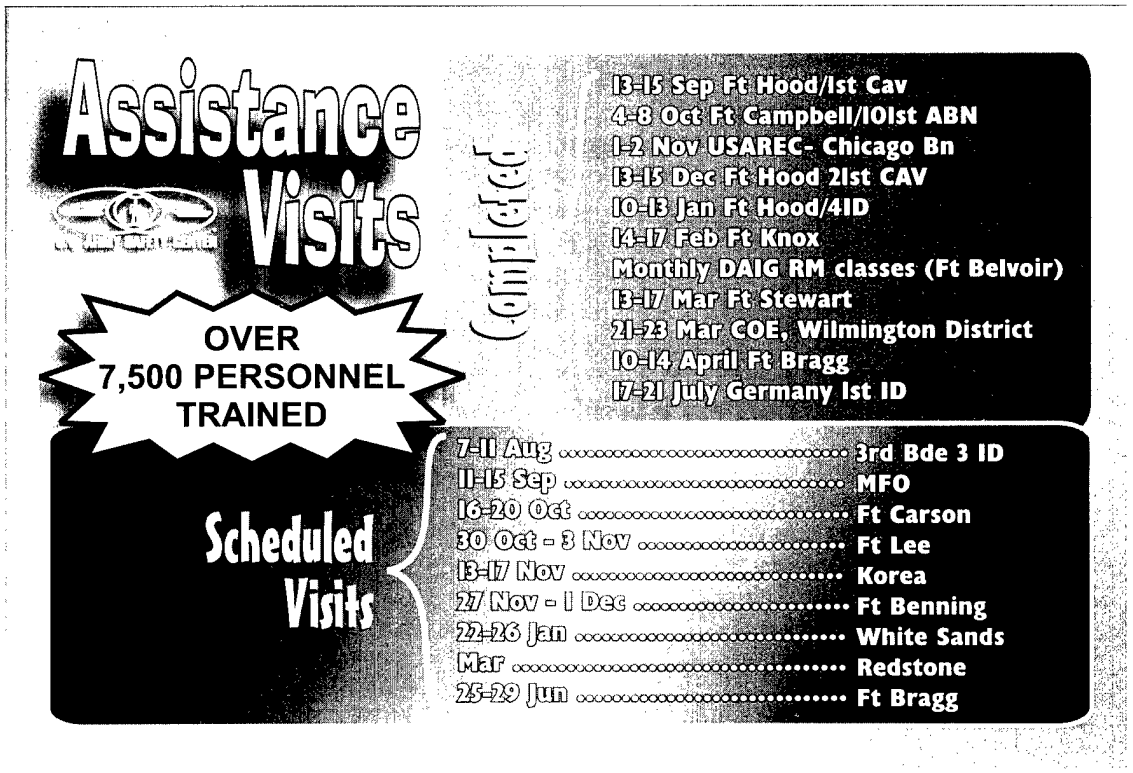
Today's commander is challenged on every front. He must continually find innovative ways to operate efficiently, effectively, and safely. Let me emphasize this last point. With everyone's plate full because of taskers, upcoming major events, and competing interests and concerns, the one thing that will stop a unit dead in its tracks is a training fatality. Everything else becomes suddenly insignificant. All the dedicated work, planning, and execution are no longer important.

The time to think about safety is now. The risk management process begins at the initial training meeting and continues through the entire operation, including the AAR and retraining. The commander must therefore use every available tool to attack safety concerns.

The Safety Center offers such a tool...and it's free of charge. That's right—Foxtrot, Romeo, Echo, Echo—FREE! It costs only a little bit of time. This valuable tool is the Assistance Visit Program, conducted by experienced USASC personnel trained in risk management techniques. We offer the commander an outside look at his unit and an information package to provide the latest and greatest in dealing with command safety issues. This is not an inspection, but an independent look at hazard identification and ways to mitigate or eliminate hazards for your soldiers.

What we do

The first thing we do is to make a contract with the commander that everything found in his unit stays with him! No one else gets the information. The exception is when an issue beyond the commander's control can be resolved



at higher levels through our intervention. We typically look at brigade-size units, offering a standard menu of events for the command to pick and choose the agenda. We provide information on recent accidents, risk management integration tips and techniques, driver's training program updates, and privately owned vehicle (POV) toolbox training.

We also look at trends and provide the commander direct feedback as to how effective his safety program is, how to improve the safety environment, and how to integrate risk management into all unit operations. This ensures risk management is an integral part of planning and execution, not just an afterthought, a checked block, or a paperwork drill.

The old adage "You don't know what you don't know" is true. We are one mechanism to provide what you don't know. To date, we've conducted 10 visits. Some interesting indicators have emerged from these visits. The following indicate a few unhealthy safety trends:

■ **Communication bottlenecks erode unit safety climate.** Lower level units in particular must know and feel the command presence, especially with emphasis on safe operations. The command safety team sets the safety climate in an organization! If the chain of command doesn't pass information about all operations in detail, the unit safety climate suffers. Informed soldiers are safer soldiers.

■ **Hazards generally known at lower levels are not communicated up the chain.** We talk to soldiers at all levels. We often find that the chain of command is entirely unaware of complaints about many safety issues. We use a tool called the Next Accident Survey, **http://safety.army.mil** (click Risk Management/ Overview/Tools). We ask the soldiers what will cause the next accident in their unit. In one case, soldiers identified an overcrowded hangar that could result in damage to an aircraft being ground handled. Within minutes, that very accident occurred. Oftentimes, soldiers know what is not right, but they may not know how to resolve the problem.

■ **The unit safety officer greatly influences the command safety climate.** If the safety officer or NCO is not aggressive, outspoken and energetic, the unit safety program can become reactive rather than proactive. He must be trained, involved, and active in all operations. He must understand the risk management process, **http://safety.army.mil** (click Training tab).

■ **Exceptionally high OPTEMPO may translate into hazard-producing shortcuts.** Today's mission load can be taxing. As the plate fills up and the train moves on, time becomes both critical and scarce. Sometimes there isn't enough time in the day to get everything done. We attack the most imminent threat first, and worry about the next event later. Sometimes we don't give adequate weight to proper planning and risk management techniques. That's when the shortcuts begin. "We know this isn't the way we're supposed to do this, but next time we'll do it right." The translation is that we have just set a new lower standard. Most accidents involve ignored standards.

■ **Unit SOPs are generally not used, not understood, or ignored due to time constraints.** This is an alarming fact. Ask your soldiers what the SOP says about accomplishing a given task. Ask your junior leaders the same question. They may have an understanding of the basic task, but will likely be unaware of what the SOP describes. SOPs are developed from lessons learned—the hard way. It is a tragedy to allow soldiers to pay with blood for something already known. Enforce the SOP and make certain soldiers know and understand its contents.

We have outstanding troops. They will always find a way to get the job done. If they know and understand the standard, they will follow it, given adequate time and resources. It is the command's responsibility to ensure they have the knowledge, time, and resources necessary. Our Assistance Visit team can help leaders do just that.

For more information check out the Safety Center web site at **http://safety.army.mil.** ♦

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How About Those Junior Officers?

Do you think junior officers and warrant officers need risk management training? Trends show that junior leaders often fail to execute their responsibilities to manage risk and enforce standards, either due to ignorance or time constraints. A vast majority of critiques from soldiers attending our NCO Professional Development (NCOPD) course strongly recommended that their supervisors get some risk management training.

We listened and developed a special program just for the young lieutenant, captain, or warrant officer in a leadership position. The Junior Officer Professional Development (JOPD) course is based on risk management training conducted in the NCOPD course, tailored to the junior officer level of responsibility.

The 3-day, 24-hour JOPD course is focused on hazards identification, risk management, the Army Safety Program, and leader responsibilities. The target audience is the young company grade officer or warrant officer technician charged to integrate risk management into both the planning and execution phases of training and operational missions. An additional benefit of this training is that the officers can transfer this knowledge and become better off-duty risk managers.

This is a great course to integrate into your local pre-command course or company XO course. Here's how it works... Units provide up to 30 junior officers for 3 days of training. The only cost to the unit is the commitment of time and personnel. We pay for everything else! In return, the course produces officers better prepared to identify and control hazards in motor pools, convoys, ranges, wherever high-risk operations may occur.

The course consists of classroom instruction and practical exercises in understanding risk management, risk management integration, and hazard identification. Lessons learned from actual accidents are then integrated into the training. Student officers are provided tools to assist them in managing risks for their soldiers, both on- and off-duty. Finally, they will have an opportunity to apply what they have learned at an on-site safety visit to an operational facility, typically a motor pool.

Risk management is the Army process for enhancing combat readiness and reducing losses. The JOPD training will make a significant impact by providing hands-on risk management training to the junior officer leadership of the Army. ♦

Additional information and scheduling may be obtained by checking the U.S. Army Safety Center homepage at http://safety.army.mil or calling (334) 255-2908.

Survival of the Fittest

More Is Not Always Better

This is the second in a series of articles on physical training and their accident causes. This issue is dedicated to weight training. Future issues will cover warning signs of heart attack, sports injuries, and exercising in cold environments.

The world is getting into shape! It seems everyone is getting on the exercise bandwagon. What a wonderful way to make us look and feel better. There are two kinds of exercise to get in shape and stay in shape: aerobic (which makes your heart and lungs more efficient) and anaerobic (which builds muscle, burns fat, and helps you control your weight). An excellent anaerobic workout is weight lifting.

Before you start pumping iron, be aware of the hazards. If your body isn't used to the exertion, you'll be sore; at worst, you'll strain muscles and tear ligaments. You can also injure your back and neck—painful injuries that may often never permanently heal.

Here are a few pointers to make steady progress and never miss a workout.

■ **Start slowly.** After work, soldiers rush to the gym, hustling to get into shape before returning home. They have good intentions, but the risk of injury is high. Stretch before and after every workout. It will increase your flexibility. Don't be afraid to ask questions. Most people in the gym will be more than happy to share their knowledge with you.

■ **Have a spotter.** When lifting free weights, always have a spotter with you to help in case of overexertion.

■ **Proper form.** The familiar adage, "if a little is good, more is better," should not be followed. The danger with that is some will take that expression too far and the chance of sustaining an injury is greater. Proper technique will produce better results with less weight than if you incorrectly lift more weight. Don't be embarrassed if you cannot lift as much as others can; work your way up gradually. Bend your knees, not your back. A weightlifting belt worn properly may help you maintain proper form, but it does not provide absolute protection from injury.

■ **Wear the right clothes.** Tight clothing restricts movement and loose clothing may get caught in exercise machinery. Rubber-soled shoes will keep you from slipping. Gloves will keep your hands from becoming callused and will also keep weights from slipping out of your hands.

Novice weight lifters have been hurt by free weights that fall off the bar. To keep the weights from falling off while you lift them, fasten a collar on each side of the bar. Return the weights to the rack when you finish your exercise, because free weights lying on the floor can trip other lifters.

Remember these tips; lifting weights is hard enough without learning the hard way. ♦

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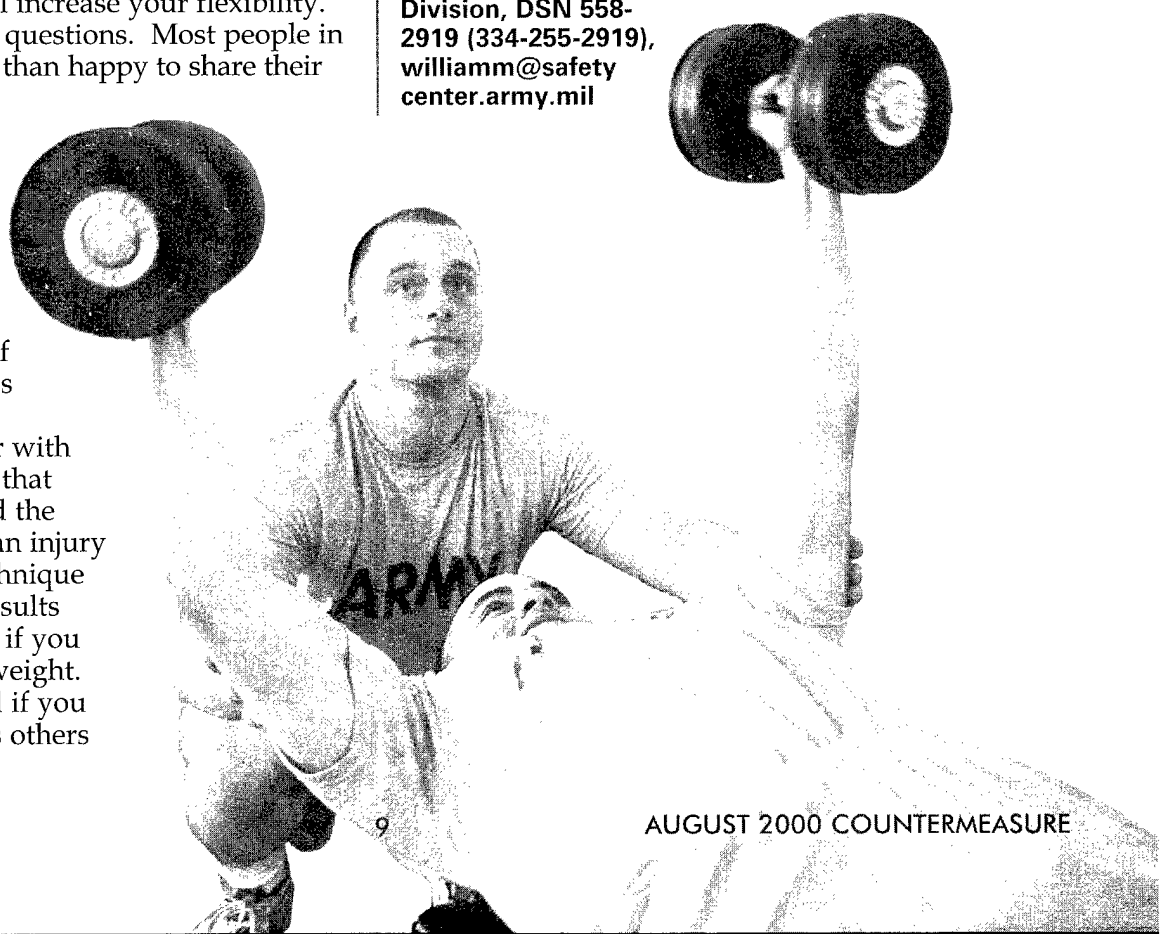

Behavioral Safety

In a previous issue of Countermeasure, we discussed organizational safety culture and its implications for commanders. Here, we explore two other important issues: first, the question of why so many soldiers engage in poor safety behaviors, and secondly, strategies for changing such behaviors. The more we can translate our knowledge of the behavioral causes of accidents into effective strategies for changing these harmful behaviors, the further we will advance our safety campaign.

"Organizational Safety Culture: Implications For Commanders" (October 1999 *Countermeasure*) outlined how distributed concern for safety needs to be representative of all unit soldiers. This is nothing new. Indeed, most soldiers are at least somewhat aware that inadequate safety practices have the potential for disaster. Nevertheless, these behaviors are widespread—even epidemic—in the Army. So, why do soldiers ignore the evidence and continue to behave in unsafe manners? Why are these habits so deeply ingrained?

Why are poor safety behaviors so widespread?

Unsafe habits can often be traced to leaders and first-line supervisors who have modeled unsafe behaviors. The Army is a constant learning environment, and the NCO is typically a soldier's most influential role model. Research reveals a strong relationship between unsafe habits in leaders and their soldiers. While other factors also contribute to this relationship, observational learning certainly plays an important causative role.

Soldiers also tend to be overly optimistic about their immunity to major safety problems. Unfortunately, unrealistic optimism undermines legitimate worry about risk; it may reduce the likelihood that soldiers will engage in accepted safety behaviors or accept safety interventions. Curiously, while soldiers are inclined to underestimate the risks associated with their own unsafe habits, they tend to have a much clearer impression of the potential catastrophic effects of such behaviors in others.

Another reason why poor safety habits are so widespread is that soldiers often have little reason or incentive to practice safe behaviors. In fact, many are recognized for their ability to "get more done with less" and for finding "innovative" solutions to such problems.

Rewards and recognition from superiors are highly reinforcing. Behaviors that are reinforced tend to be repeated. The adverse effects of these safety shortcuts may have little or no noticeable impact on safety and routine operations for many years. Yet, as these practices get repeated, the association between the unsafe behavior and risk loses focus—until it's too late.

Thus, we see that several factors work together to establish and maintain unsafe behaviors. So, how can we develop strategies to modify and change these behaviors?

Changing safety-damaging behaviors

As you can imagine, it is not an easy task to change behavior. All of us know of soldiers who, in spite of clear evidence that they are endangering themselves or others, continue to engage in unsafe behaviors; e.g., driving over the speed limit. An important step in getting soldiers to modify or eliminate their unsafe habits is to provide sufficient motivation to fuel such positive change.

Fear for safety

Fear appeals have often played a major role in efforts to motivate people to change their behavior by changing their attitudes toward safety. All of us have been exposed to fear campaigns to stop smoking, eat healthier, drink less, and other health promotion media efforts. Persuasive safety-promotion messages with moderate fear appeal can also be effective in changing safety attitudes and behaviors. Fear of high-risk behaviors,

together with knowledge about effective preventive practices, will result in both significant increases in safer behavior and substantial reductions in the rate of accidents.

Research has shown that informational campaigns may be most effective when they—

- Are colorful and related to real life; e.g., use case histories.
- Avoid statistics and jargon.
- Are short, clear, and direct.
- Present strong messages at the beginning and end of the message.
- State conclusions explicitly rather than merely implying them.
- Are delivered by a prestigious and trustworthy individual.

No short-term solutions

History shows that change will not occur overnight. Such efforts are generally more effective in changing attitudes than behaviors. However, such campaigns have some important benefits that are likely to show up in the long run. First, they will acquaint soldiers with the risks that they might not have been aware of associated with their behavior. Such messages can and do have a cumulative effect over time in modifying both the Army's collective attitude about safety and eventually the safety behavior of soldiers. For example, it is now clear that Army attitudes toward smoking in government buildings, illegal drug use, and driving under the influence of alcohol have changed appreciably in recent years due to hard-line, negative, zero-tolerance campaigns.

Because poor safety habits are so deeply ingrained and widespread, it is understandable that efforts to change safety-impairing behaviors by changing people's attitudes are often not sufficient. To push safety in a positive direction, hard-line policies and procedures can provide the incentive or motivation to behave in a safe manner. Toward this end, leaders and safety professionals must focus on safety-impairing habits and modify the conditions that cause and support these harmful behaviors. ♦

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Accidents Are As Close As Your Own Backyard

Many soldiers doing yard work have found that their own back yard can be almost as dangerous as the field environment. Lawnmowers, hedge trimmers, and heat take their toll year after year.

Lawnmowers cannot only chew up grass; they can chew up hands and feet. One soldier who was cutting grass noticed the mower was stopped up. Grass clippings were not being pushed out the side as they should have been. Leaving the mower running, he reached to clear a wad of grass that was blocking the discharge chute, and the spinning blade nearly cut off his finger. Operators should be sure the mower is off and the blade stopped before clearing chute or reaching underneath.

Ear protection is also a good idea; even low horsepower mowers are loud enough to damage hearing. And a little maintenance on those burned-out mufflers would help the noise, as well.

Power edgers and weed trimmers, as well as mowers, can throw sticks, stones, and other objects that can injure the eyes of operators and those nearby. Safety glasses or goggles will protect the eyes. Long sleeves, long pants, gloves, and appropriate footwear make trimming and edging much less hazardous.

Most of this type work is done in the intense heat of summer. Individuals need to take precautions against heat injury and make sure their fluid intake is adequate.

Soldiers need to remember safety precautions are not just for field exercises; they're also necessary in your own back (and front) yard. ♦

Written by accident investigators to provide major lessons learned from recent centralized accident investigations.

Investigators' Forum

High Price of Complacency

Three vehicles and their crews were heading from main post to an external training area to conduct systems validation tests in preparation for an upcoming external evaluation. These tests were conducted over several days, so the elements participating in the exercise had to make the trip to and from the training area every day. The route consisted of two straight, paved roads, and included an unguarded railroad crossing. The railroad tracks run parallel to the roadway.

The unit departed for the training area a few minutes late due to maintenance problems with the platoon's fourth truck, which was left behind in the motor pool. They left the staging area in the march order defined by the unit SOP, with a HEMMT tractor-trailer combination in the lead, a cargo HEMMT in the middle, and a 5-ton command and control truck at the end. The platoon leader was assigned to the 5-ton truck, so he rode in this vehicle. None of the trucks had any radio equipment in their cabs, so their crews could not communicate during the march except by hand and arm signals.

The group moved along the roadway at the posted speed limit of 35 miles per hour. As they approached the intersection to turn left to cross the railroad tracks, they slowed to about 15 miles per hour. The lead truck crossed the tracks without incident, but the second vehicle was struck on the driver's side of the cab by the lead locomotive of a large freight train moving at about 60 miles per hour. The HEMMT was completely destroyed, and both occupants were killed.

Mission: Deploy To Training Area

Hazard

- Unguarded railroad crossings
- Train horns cannot be heard from inside HEMTT cabs

Results

- 2 fatalities

Controls

- Stop, look, and listen at all railroad crossings
- Vehicle commanders make sure drivers pay attention
- March unit OIC positioned to positively control march element

What went wrong?

Although the train had its lights on and was plainly visible as it approached the crossing, no one looked to see if one was coming. At a speed of 60 miles per hour, the lead locomotive was about one quarter mile away when the trucks began the left turn, and it was only seconds away when the first truck crossed the tracks. Neither crew looked to see if a train was

coming. As a result, they did not see it until it was too late.

Lessons learned

Vehicle crews need to STOP, LOOK, and LISTEN when they approach railroad crossings. The crews in this case did not look, and therefore, did not see the train. FM 21-305 tells crews to slow down at crossings. These crews had driven this exact route on numerous occasions and may have become complacent in the perception that no trains would be traveling at that crossing.

During a re-creation of the events surrounding this accident, the investigation board discovered that a train's horn could not be heard from inside a HEMMT cab until the train was about 3 seconds away. This is not enough time to identify the sound, react to it, and stop the vehicle in time to avoid a collision. Crews need to know that they cannot rely solely on the horn as their first warning of an oncoming train. Vehicle cabs are inherently noisy, with fans, heaters, engine noise, and radio traffic all potentially contributing to drown out external sounds.

Vehicle crews need to STOP, LOOK, and LISTEN when they approach railroad crossings. This crew became complacent in the perception that no train would be traveling this track... They were DEAD wrong!

The senior person present in a motor vehicle movement is responsible for the safe conduct of its mission. In this case, the senior soldier was the platoon leader. His vehicles did not have radios in their cabs, so there was no way to inform them of any dangers during the march. He could have ridden in the lead vehicle so that he could physically stop the group if he identified a problem. But in this case, he chose to ride in his assigned vehicle, which per unit SOP, travels toward the rear of the platoon. As a result, he was unable to do anything more than watch this accident happen, therefore he was not "in charge" of the convoy.

March element leaders are also responsible for managing the risks associated with the movement. In this case, the unit's leaders knew of the presence of the unguarded railroad crossing; however, it was not briefed as a hazard during the pre-mission safety briefing. Therefore, no control measures were taken to minimize the risks associated with the crossing. Examples of prudent control measures include requiring vehicles to stop before crossing the tracks, placing the platoon leader at the head of the movement to personally make sure the route is clear, and briefing it explicitly to all personnel to remind them of the need to stop, look, and listen before crossing the tracks. A last minute reminder may have helped the crewmen remember to look for a train as they approached the crossing.

The occupants of the accident vehicle were ejected during the collision. They were not wearing their seatbelts. This accident may not have been survivable, but leaders need to ensure that their soldiers wear their installed seatbelts whenever the vehicle is moving. They can do this by emphasizing seatbelt use during safety briefings, roadside checks, and sanctions against crewmen caught not wearing them.

Summary

This accident was caused by complacency on the crew's part and poor command and control of the march element. The crew became complacent in their belief that the crossing did not pose a hazard, and the leaders of the unit did nothing to ensure that the crew safely crossed this hazardous area. If the leader had placed himself in a lead position to control the group's movement and properly managed the risks associated with this railroad crossing, this tragic accident might not have happened. ♦

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Risk Management for Joint Level Exercises

Exercise Bright Star is the largest overseas deployment exercise in which the U.S. Army participates. The last Bright Star conducted in Egypt (1999/2000) was a success by many accounts. The implementation of risk management during an exercise of this magnitude is a challenge for any safety officer.

Bright Star was primarily focused in Mubarak Military City (MMC) and located approximately 130 miles west of Cairo during the period 20 September through 20 November.

Pre-deployment phase.
The most critical element of risk management is to imbed risk mitigation principles in the initial planning stages of the deployment. A review of the Joint Uniformed Lessons Learned System (JULLS) provided a good basis for identifying risks from previous deployments such as Desert Storm, Desert Thunder, Desert Fox, and Bright Star. A risk management plan was developed from this statistical information. A number of pre-deployment safety initiatives were written, among them:

- **Commander's safety philosophy.** The commanders' safety philosophy was that no unnecessary risk would be taken in the training environment and that all units would implement risk management as a tool for their operations.
- **Safety briefings.** A PowerPoint safety briefing was developed and disseminated on web sites and e-mailed to deploying units.
- **Safety officers.** Coordination was effected to provide Reserve Component units, such as the 377th Theater Support Group, with professional and fully-qualified safety officers from the FORSCOM Army Safety Augmentee Detachment (ASAD) Program.
- **Safety publications.** Safety publications such as the Warfighter's Safety Guide, Leader's Safety Guide, Middle East Driver's Safety Pamphlet, and an assortment of safety posters were published beforehand.
- **Operations plan.** The safety annex to the OPLAN was published.

Central to the OPLAN was the requirement to conduct risk assessments applicable to the mission, location, and the diverse number of units that fell under the auspices of Third U.S. Army's Coalition Force Land Component Command (CFLCC) organizational structure.

■ **Site survey.** A safety site survey of the MMC was conducted primarily to assess the future challenges in the area of safety, but also to establish a common-sense approach to the parking plan for the 10 rotary-wing assets. Knowing that dust can potentially cause tremendous damage to turbine engines as well as pose a higher risk to aircraft browning out during landing, the decision was made to park helicopters on existing vehicle parking areas. MEDEVAC pads were established in close proximity to the field hospital.

Deployment phase.

Risk management was briefed to the command daily to keep safety in the forefront during the entire exercise. The focal points throughout the operation were areas that create "catastrophic" and "critical" levels of accident severity: ammunition, vehicle, petroleum, oils, and lubricants (POL), and aviation safety. Once risk mitigation was implemented in these areas, the focus shifted to those areas with higher accident probability factors.

The safety officer worked as an integral part of the commanders' special staff and worked directly for the commander through the chief of staff. During the deployment phase, daily accident information was retrieved from several sources: the field hospital provided a record of the daily injuries, military police (MP) provided information on vehicle accidents, range control provided information on significant events at the range, and CFLCC C-3 aviation provided aviation-related incidences.

On the first day of deployment, the safety office produced an Emergency Contact Sheet that provided all the important safety-related telephone numbers and frequencies. As the base camp communications architecture evolved, the safety office kept abreast of changes and we inevitably published six editions of this document. This sheet included phone numbers for the field hospital, MPs, Egyptian Fire Department, MEDEVAC, and range control, to name a few. This eventually became an annex to the MMC and Base Camp Pre-Accident Plan.

■ **Range safety.** The CFLCC safety officer, in conjunction with range control, observed all range activities. Daily range meetings became a critical platform to brief accident prevention to coalition forces that were not keenly familiar with risk management. Briefings included graphic pictures to highlight the dangers of unexploded ordnance (UXO) and careless or accidental discharge of weapons systems.

The U.S. Marine Corps element drafted a range SOP and executed a superb range operation. They provided liaison officers (LNOs) to most coalition partners. The challenge was ensuring that 15 separate coalition forces utilized a single common procedure for range operation.

■ **Vehicle safety.** As with most deployments, vehicle safety proves to be the greatest danger to the warfighter. LTG Tommy R. Franks' philosophy was stressed to the command, "A parked vehicle has never killed anybody." Stringent vehicle dispatch policies were implemented. Additionally, the CFLCC adhered to the U.S. Embassy policy to not conduct any vehicle nighttime operation outside of the operations area due to problems inherent with in-country vehicle hazards; i.e., many Egyptian roads do not have lights, road markings are often non-existent, and many civilian vehicles operate without headlights.

The MP battalion became a critical element in vehicle safety. The MPs were very proactive in their efforts which included, but were not limited to, establishing, posting and enforcing speed limits, creating speed bumps to slow down traffic, establishing traffic control points for convoys, and providing convoy escorts to check convoy speeds.

■ **Aviation safety.** The CFLCC safety office was also located with the CFLCC C-3 aviation section. An aviation safety council was established and met weekly as the CFLCC developed into a more robust operation. Aviation safety issues were addressed and resolved in this forum. The most significant issue that remained unresolved was the absence of a fully-integrated primary crash alarm system.

An Internet link with the U.S. Army Safety Center ASOLIST provided a current source of Safety-of-Flight and Safety-of-Use messages. We created the Bright Star Aircrew Information Manual, which served as a guide to aircrews in the effort to deconflict airspace and ensure a common operating procedure among all the coalition aircrews.

■ **Ammo/weapons safety.** Ammunition and weapons safety is a challenge for any deployment and this challenge is increased when coalition forces are involved. The primary control for weapons safety was implementing a policy allowing only those personnel involved in the force protection security mission to carry

small arms ammunition. Small arms ammunition was only issued at the ranges in conjunction with range activities.

■ **Electrical safety.** Approximately 40,000 meters of electrical wire were laid by the Prime Power crew by either elevating above the standard height of cargo vehicles and whip antennas or buried underground. The major concern was electrical wiring to civilian bazaars and the contract tents erected by local nationals, which may not have met the electrical codes. Coordination and much effort were expended preventing these areas from becoming an electrical hazard.

■ **POL safety.** The 110th Quartermaster Company established the bulk fuel point. The layout of the fuel points was by the book and went above and beyond the required standards.

■ **Base camp safety.** Elements of safety were made part of the newcomer's briefing to highlight those safety issues that could not be mitigated. There were many existing hazards at MMC that could never have been mitigated such as electrical and trip hazards. Safety awareness was further enhanced through the use of safety mini-posters that were disseminated to the subordinate commands. Twenty pages of "safety one-liners" were provided to the FM radio station, "Bright Star Radio" and were effectively used to promote safety awareness to our radio audience.

The biggest concern was tent fires, which always exists in a tent city. Safety awareness remained the key and the no-smoking policy in tent areas was emphasized and enforced during all phases of Bright Star.

■ **Warfighter endurance.** Mental and physical preparation of soldiers was a primary focus and there were a small number of incidences of dehydration. Health hazards were present and the preventive medicine teams were active in treating areas requiring mitigation of airborne pathogen hazards.

Post-deployment phase.

Capturing lessons learned is essential in ensuring future Bright Star exercises are safe. Bright Star 1999/2000 statistics show that the CFLCC dispensed almost half a million gallons of fuel, drove over 3,000 vehicles, flew around 50 assorted rotary-wing aircraft, laid approximately 50 miles of electrical wire, and expended over 300 short tons of ammunition.

For a period of 4 to 8 weeks, over 17,000-coalition land force warfighters conducted high OPTEMPO training, accomplishing this goal safely without any major incidents or fatalities. Credit goes to the leadership and warfighters that embodied the principles of risk management and protected the force while conducting the mission. ♦

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Quickbits

In the June 2000 Countermeasure article, "Weapons Clearing—A Loaded Issue," we inadvertently left out an important step in the clearing procedures for the Caliber .50 w/M10 charger. We regret this error.

IAW FM 17-12-1-2 dated May 98 (Page A-18)

■ Move safety switch to "S" (SAFE) position.
■ Open cover.
■ Lift extractor and remove ammunition belt from feedway.
■ **Lower extractor and close cover.**
■ Move locking selector on M10 charger to the rear (LOCKED) position.
■ Pull back on charging handle and lock bolt to the rear.
■ Open cover.
■ Look into both the chamber and T-slot for ammunition.
■ Move locking selector on M10 charger to the forward (RELEASE) position.
■ Pull back on charging handle and ease bolt forward.
■ Close cover.
■ Move safety switch to "F" (FIRE) position.
■ Press trigger to fire weapon. ♦

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